

### **3. Amendments to the Claims:**

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

#### **Listing of Claims:**

1. (Currently Amended) A nanostructure of an inorganic semiconductor material, ~~characterized in that the nanostructure comprises~~comprising:  
a nanotube with a crystalline mantle and a hollow core, wherein the crystalline mantle has a crystalline structure of a diamond structure, a zinc blend structure, or a wurtzite structure.
2. (Currently Amended) A nanostructure as claimed in claim 1, ~~characterized in that~~wherein the hollow core has a diameter in the range of 2 and 20 nm.
3. (Currently Amended) A nanostructure as claimed in claim 1, ~~characterized in that~~wherein the mantle has a thickness in the range of 1-20 nm.
4. (Currently Amended) A nanostructure as claimed in claim 1, ~~characterized in that~~wherein the crystalline mantle comprises a compound semiconductor, and the hollow core is partially filled with the compound semiconductor material ~~of the mantle of the nanotube.~~
5. (Currently Amended) ~~prises~~ a first zone having a p-type doping and a second zone having an n-type doping, the first and second zones having a mutual interface constituting a pn-junction.
6. (Currently Amended) A nanostructure as claimed in claim 1, ~~characterized in that~~wherein the inorganic semiconductor material is chosen from the group of III-V

semiconductor materials.

7. (Previously Presented) A dispersion of nanostructures according to claim 1 in a solvent.
8. (Previously Presented) An electronic device comprising a first and a second electrode which are mutually connected through at least one nanostructure according to claim 1.
9. (Currently Amended) An electronic device as claimed in claim 8, ~~characterized in that~~ further comprising an insulating substrate with pores that are mutually substantially parallel ~~is present, wherein the nanonstructures are provided and the pores~~ extend ~~extending from the first to the second electrode, in which pores the nanostructures~~ are provided.
10. (Withdrawn) A method of preparing nanostructures of a compound semiconductor material, comprising the steps of: providing growth nuclei of an electroconductive material on a electroconductive surface of a substrate; and growing the nanostructures by chemical vapor deposition at a growth temperature, characterized in that the growth temperature is above a first transition temperature during a first growth period, therewith obtaining nanotubes having a crystalline mantle and a hollow core.
11. (Withdrawn) A method as claimed in claim 10, characterized in that the thickness of the mantle is varied by variation of the temperature above the first transition temperature.
12. (Withdrawn) A method of manufacturing an electronic device, comprising the steps of providing growth nuclei of an electroconductive material on a electroconductive surface of a substrate, the surface being patterned so as to define a first electrode; growing nanostructures of a compound semiconductor material by chemical vapor deposition at a growth temperature; and providing a second electrode that is in electrical

contact with the nanostructures grown, characterized in that the growth temperature is above a first transition temperature during a first growth period, therewith obtaining nanotubes, having a crystalline mantle and a hollow core.

13. (Withdrawn) A manufacturing method as claimed in claim 12, characterized in that during the growth first a first dopant is added to the vapor in the chemical vapor deposition reactor and thereafter a second dopant is added, the first dopant being of a first doping type and the second dopant being of a second doping type.